



# Jet Propulsion Lab (JPL) Pasadena, California Public Health Assessment

August 1998

## ***What is ATSDR?***

ATSDR is the Agency for Toxic Substances and Disease Registry, a US Department of Health and Human Services public health agency located in Atlanta, Georgia. ATSDR is responsible for evaluating possible human health effects that can occur when people are exposed to certain hazardous chemicals or hazardous wastes.

## ***What brought ATSDR to the National Aeronautics and Space Administration (NASA) Jet Propulsion Lab (JPL)?***

JPL facilities and laboratories have used a variety of chemicals including chlorinated solvents, solid rocket fuel propellants, cooling tower chemicals, sulfuric acid, Freon, mercury, and various laboratory chemicals.

As a result of past waste disposal practices, the JPL site is now listed on the NPL - the National Priorities List, a listing of facilities throughout the United States that are known to have environmental contamination. ATSDR is responsible for evaluating all NPL sites for possible human health effects that may occur if people are exposed to environmental contamination. One way that ATSDR fulfilled this responsibility is by conducting a public health assessment.

## ***What is a public health assessment and what is the purpose for doing one?***

In the public health assessment process, ATSDR review environmental and health-related information about an NPL site, and make recommendations to protect public health. ATSDR works with other federal and local agencies to carry out those recommendations.

ATSDR conducted a public health assessment of the JPL site to learn whether people living near or working at the facility were exposed to hazardous chemicals and, if so, whether there have been health effects from such an exposure. By learning more about whether people are or have been exposed to hazardous chemicals, ATSDR can provide helpful information to the community and take the necessary steps to prevent or reduce possible future exposures.

## ***What information does the public health assessment provide?***

A public health assessment provides information about:

- the amount and type of environmental contamination at a site;
- potential human exposure pathways -- the way a person might have

- come into contact with contaminated materials;
- the number of people living near the site and whether there are children or others at special risk of exposure;
- whether the site conditions present a health hazard; and
- the review of health outcome data, **when warranted**, -- for example, when completed pathways of exposure are identified, a review of how often certain illnesses have occurred in the community compared with the frequency of those illnesses in other people may be helpful.

By looking at these factors, ATSDR can be sure that the public health assessment process will be protective of human health, reach the appropriate conclusions about whether a public health hazard exists, and provide suitable recommendations to the community and to other agencies.

### ***How can the community be involved in the public health assessment process?***

ATSDR is required to give community members an opportunity to provide information to the health assessor or others involved in the public health assessment process. Participation by the community also requires that people have a chance to review the public health assessment report before it is finalized.

ATSDR held four community sessions on December 2-3, 1998 to learn about the community health concerns for JPL. From those sessions, ATSDR identified the following community health concerns: 1) future groundwater and drinking water quality and 2) increased incidence of Hodgkin's disease. Those concerns were evaluated in the Assessment.

You can comment on the JPL Public Health Assessment. Information listed at the end of the fact sheet gives you an address where you can send your written comments. You can also call us about questions you may have about the JPL Assessment.

### ***What has ATSDR learned about the JPL site?***

- ATSDR made site visits to JPL in 1997 and identified two pathways where people could potentially be exposed to site-related contaminants: 1) exposure to contaminated groundwater and 2) exposure to contaminated soil.
- Based upon our review of potential environmental pathways, ATSDR concludes that JPL should be assigned to the Indeterminate Public Health Hazard category.
- Groundwater at the JPL (on-site) does not present a past, present, or future public health hazard, because groundwater has never been used for drinking and there are no plans to use this groundwater in the future.
- VOC (volatile organics) contamination in off-site groundwater does not present a past, present, or future public health hazard because water suppliers (or purveyors) have regularly monitored drinking water wells and taken steps (e.g., water blending, water treatment, or well closure) to ensure the water is safe. These actions will continue to prevent exposures to contaminated groundwater in the future.

- Perchlorate contamination (a by-product produced when rocket fuel is burned) in off-site groundwater presents no apparent present or future public health hazard. Current sampling and blending procedures by the drinking water suppliers are expected to prevent any potential present or future public health hazards posed by perchlorate in groundwater.
- Past exposures to perchlorate contamination present an indeterminate public health hazard because there are no data on perchlorate levels before 1997.
- No public health hazards are associated with exposure to contaminated soils at JPL.
- Community members expressed concern about a perceived increased incidence of Hodgkin's disease in communities surrounding JPL. Hodgkin's disease is not known to be associated with exposure to any chemical, however.

***What are the next steps suggested by ATSDR?***

- This document is available for your review from August 10, 1998 to September 9, 1998. Your comments will be part of the public record and will be addressed and included in the Assessment, although **names** of who made the comments **will not** be included.
- Environmental investigations at the JPL is ongoing. When those reports are available, ATSDR will evaluate them to ensure they are protective of public health.
- When more information is known about the toxicological effects of perchlorate, ATSDR will review those studies or reports to determine if ATSDR should recommend additional actions or change it's findings for the JPL.

***How can I get more information about the public health assessment?***

- For information about the JPL site, or the public health assessment, or to receive a copy of the assessment, you can call the ATSDR toll free telephone number, 1-800-447-1544. When calling, please leave your name, address, and telephone number and refer to the JPL site, or you may ask to speak directly to W. Mark Weber, health assessor or Linda West, the community involvement representative. You may also contact Dan Strausbaug, the regional representative, in San Francisco, CA at 415/744-1774.

***Where can I see a copy of the public health assessment report?***

Pasadena Central Library  
 285 East Walnut  
 Pasadena, CA 91101  
 818-405-4057  
 Contact: Elaine Zoribias, Head of Research

La Canada-Flintridge Public Library  
 4545 Oakbrook Avenue  
 La Canada, CA 91011

818-790-3330

Contact: Ms. Berry Shemaria

Altadena Public Library

600 East Mariposa Street

Altadena, CA 91011

818-798-0833 or 798-0834

Contact: William Tema, District Librarian

JPL Library

4800 Oak Grove Drive

Pasadena, CA 91109

818-354-4200

Contact: Judy Castagno

You can review and comment on the JPL Public Health Assessment. The public comment period will run from August 10, 1998 to September 9, 1998. Please send written comments, postmarked no later than **DATE**, to the following address:

Chief, Program Evaluation, Records & Information Branch  
Agency for Toxic Substances and Disease Registry  
1600 Clifton Road, NE, Mailstop E-56  
Atlanta, GA 30333

# ATSDR

AGENCY FOR TOXIC SUBSTANCES  
AND DISEASE REGISTRY

## Jet Propulsion Lab (JPL) Pasadena, California Public Health Assessment

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### What is ATSDR?

ATSDR is the Agency for Toxic Substances and Disease Registry, a U.S. Department of Health and Human Services public health agency located in Atlanta, Georgia. ATSDR is responsible for identifying persons who might be at risk because of exposure to hazardous substances or waste in the environment and for evaluating relationships between exposure and adverse health outcomes.

### What brought ATSDR to the National Aeronautics and Space Administration (NASA) Jet Propulsion Lab (JPL)?

Under a contract with NASA, the California Institute of Technology runs JPL and maintains the facility. Primary activities at JPL include automated exploration of the solar system and deep space, including the Mars Pathfinder mission and tracking spacecraft.

JPL facilities and laboratories have used numerous chemicals in their operations, including chlorinated solvents, solid rocket fuel propellants, cooling tower chemicals, sulfuric acid, freon, mercury, and various laboratory chemicals.

As a result of previous waste disposal practices, the JPL site is now listed on the National Priorities List (NPL), a listing of facilities in the United States that are known to have environmental contamination. ATSDR is responsible for evaluating all NPL sites for possible adverse health effects in persons exposed to contamination. One way that ATSDR fulfills this responsibility is by conducting public health assessments.

### What is a public health assessment, and what is the purpose for doing one?

In the public health assessment process, ATSDR reviews environmental and health-related information about an NPL site and recommends ways to protect public health. ATSDR is an advisory, non-regulatory public health agency that works with other federal and local agencies to carry out those recommendations.

ATSDR conducted a public health assessment of the JPL site to learn whether persons living near or working at the facility were exposed to hazardous chemicals and, if so, whether adverse health effects have resulted from such an exposure. By learning more about whether such persons are or have been exposed to hazardous chemicals, ATSDR can provide helpful information to the community and take necessary steps to prevent or reduce future exposures.

### What information does the public health assessment provide?

A public health assessment provides information about

- the amount and type of environmental contamination at a site;
- the potential human exposure pathways (that is, ways that a person can come into contact with contaminants such as breathing air, drinking or contacting water, contacting or eating soil or eating food);
- the number of residents near the site, and whether there are children or others at special risk for exposure;
- whether the site conditions present a health hazard; and the review of health outcome data, if necessary. For example, if human exposure to environmental contaminants has occurred at levels that might result in harmful health effects, information about how often certain illnesses occur in the community can be compared with the frequency of those illnesses in persons who have not been exposed.

By evaluating these factors, ATSDR can ensure that the public health assessment process (1) protects human health, (2) determines whether a public health hazard exists, and (3) makes recommendations to the community and to other agencies.

### How can the community become involved in the public health assessment process?

ATSDR is required to give community members an opportunity to provide information to the health assessor or others involved in the assessment process. Community participation also requires that all interested persons have a chance to review the public health assessment report before its completion.

ATSDR held four community sessions on December 2-3, 1997, to learn about community health concerns regarding JPL. From these sessions, ATSDR identified the following community health concerns: the future quality of groundwater and drinking water in the area and the perceived increased incidence of Hodgkins disease. These concerns were evaluated in the assessment.

You can comment on the JPL Public Health Assessment by sending your written comments to the address listed at the end of this fact sheet. You can also call ATSDR and ask questions about the assessment.

## What has ATSDR learned about the JPL site?

- ATSDR made site visits to JPL in 1997 and determined that persons could be exposed to site-related contaminants through two pathways: exposure to contaminated groundwater and exposure to contaminated soil.
- ATSDR reviewed potential environmental pathways and estimated the extent and time of exposure. The agency concluded that, overall, no adverse health effects are likely to result from exposures that occurred in the past, may be occurring now, or might occur in the future. This conclusion was based on the following:
  - Groundwater at the JPL site has never been used for drinking, and there are no plans to use this groundwater in the future.
  - Off-site groundwater supplies have been monitored for volatile organic compounds (VOCs), treated, and then blended to ensure that the water is safe. This practice will continue in the future.
  - Perchlorate (a chemical used in solid rocket fuel) contamination was detected in off-site groundwater at levels that are not expected to cause adverse health effects. As with VOCs, current sampling and blending procedures by drinking water suppliers will prevent harmful exposures.
  - Available data are insufficient to estimate exposures to perchlorate in groundwater before 1997 and to reach an opinion about possible adverse health effects that might have resulted from past exposure.
  - Exposure to contaminated soils associated with the JPL site are unlikely to cause either short-term or long-term adverse health effects in workers and community members because of low exposure levels and/or infrequent or unlikely exposures.
  - Community members were concerned about a perceived increased incidence of Hodgkins disease in communities near JPL. Hodgkins disease is not known to be associated with exposure to any chemical.

## What are the next steps suggested by ATSDR?

- This document is available for review from August 21 through September 20, 1998. Your comments will be part of the public record and will be addressed and included in the final assessment; however, the **names** of persons who comment **will not** be included.
- Environmental investigations at JPL are ongoing. ATSDR will evaluate the reports of these investigations as they become available to ensure protection of public health.

- When more information is known about the toxicologic effects of perchlorate, ATSDR will review these reports to determine if the agency should recommend additional actions or change its findings for the JPL site.

## How can I get more information about the public health assessment?

- To receive information about the public health assessment or the JPL site, or to receive a copy of the assessment, call the ATSDR toll-free telephone number, (800) 447-1544, from 9 AM to 5 PM EST. After office hours, you can leave a message on the ATSDR answering machine. Include your name, telephone number (with area code), and a suggested time to return the call. Refer to the "JPL site," and ask to speak directly to either W. Mark Weber (the health assessor) or Linda West (the community involvement representative). You may also contact Dan Strausbaug (the regional representative) in San Francisco, California, at (415) 744-1774.

## Where can I see a copy of the public health assessment report?

Pasadena Central Library  
285 East Walnut  
Pasadena, CA 91101  
(626) 744-4057  
Contact: Ms. Krista Goguen

La Canada-Flintridge Public Library  
4545 Oakwood Avenue  
La Canada, CA 91011  
(818) 790-3330  
Contact: Ms. Nancy Schram

Altadena Public Library  
600 East Mariposa Street  
Altadena, CA 91001  
(626) 798-0834  
Contact: Mr. William Tema

JPL Library  
4800 Oak Grove Drive (MS 111-113)  
Pasadena, CA 91109  
(818) 354-4200  
Contact: Mr. Eric Hines

You can review and comment on the JPL Public Health Assessment during August 21 through September 20, 1998. Please send written comments, postmarked no later than September 20, 1998, to the following address:

Chief, Program Evaluation,  
Records & Information Branch  
Agency for Toxic Substances and Disease Registry  
1600 Clifton Road, NE (MS E-56)  
Atlanta, GA 30333